In the claims:

Claims 1-9 cancelled.

10. (new) A method of determining in a non-invasive manner a trade classification, a trade value, a market value and a quality of a body of a slaughtered animal on a basis of optical image processing, comprising the steps of performing dissection trials from a sufficient number of pig carcasses, in which at first their weight is determined after killing and cooling; creating a digital image in a loin and ham region from a split side of a half carcass as an image region (1) using an imaging method; subjecting the image to an image analysis and contour progressions of a meat tissue and detecting fat tissue and bones; using contour progressions, measuring individual lengths, distances averaged over contour regions and areas, and also obtaining brightness and/or color values as characteristic parameters and measured values; within following dissection trials determining weight percentages of all cuts as individual cuts, comprising a weight of a fillet, a muscle meat of shoulder, loins boneless, ham and belly; a weight of these cuts and a weight of remaining cuts and storing them individually; allocating these characteristic parameters and measured values to a weight of a carcasses and to weights of yields of individual parts from which specific relational data are calculated as basic data; in an ongoing slaughtering operation determining

a weight of pig carcasses after killing and cooling; creating a digital image of the image region (1) from the split side of the carcass half in a ham and loin region of the pig by using an optical sensor and subjecting the digital image to image analysis; determining in the image region (1) inside the ham and loin region lengths angles, areas, brightness and/or color information with all details as characteristic parameters and measured values; using a total weight of the carcass and data from results of the previously preformed dissection trials with respect to fluctuating yields of individual cuts of non-homogenous bodies of slaughtered animals; in an active ongoing slaughtering operation correlating the basic data, obtained with dissection trials of a sufficient number of carcasses, of weight percentages from yields of individual cuts, together with characteristic parameters and measured values, including a fat area (3) and meat areas (4), meat measurements (F) and fat measurements (S), part lengths in a muscle meat and fat, a middle fat layer over a MGM (5) in a region of an area between an extension of a perpendicular (10); placing the perpendicular (10) on a straight line (9) at a level of a front (cranial) end (11) of the MGM (5) to an upper (dorsal) edge of a vertebral canal (8) up to an outer contour (2.2) of the ham an loin region, and another perpendicular (15) which is placed on a straight line (9) at a level of a rear (caudal) end (16) of the MGM (5) and stretches up to an outer contour (2.2) and a middle panniculus adiposus layer (17) in a cutlet region determined from two halves of a carcasses of a slaughtered pig in the

ham and loin region using a total weight and obtaining relational data therefrom; in an active ongoing slaughtering operation in order to estimate yields of individual cuts performing a simulation calculation with available relational data taking into consideration a total weight of two associated halves of a carcass and determining the characteristic parameters and measured values for this specifically in the ham and loin region.

11. (new) A method as defined in Claim 10, further comprising in a part step of an image evaluation in order to perform an online calculation of a muscle meat percentage (MF%) placing a straight line (9) with a direction of a straight section of a spinal column at an upper (dorsal) edge of a vertebral canal (8); and on this straight line creating a perpendicular (10) at a level of a front (cranial) end (11) of a musculus glutaeus medium MGM (5) so that its length of extension as a shortest connection from a front end (11) of the MGM (5) to an upper (dorsal) edge of the vertebrae channel (8) corresponds to a meat measurement (F) as a thickness of a loin muscle; determining at a level of a thinnest fat layer at the MGM (5) a connection line (12) from a contour of the MGM (5) to an outer contour (2.2), with a length of this extension representing an amount of fat (S); calculating the muscle-meat percentage (MF%) online from two terms (F) and (S) in accordance with a two-point method using a formula and subsequently classified into a trade class.

12. (new) A method as defined in Claim 10, further comprising in parallel with a perpendicular (10), calculating further perpendicular lengths (13) on the straight line (9) to the outer contour (2.2), with a starting point of each lengths on the straight line (9) lying in a virtually perpendicular extension of a layer between the vertebrae (6); cutting the perpendicular lengths (13) from an inner contour line (14) of a fat area (3) so that part lengths are created in a muscle meat and a fat; using their length as fat and muscle length and using their relationship with respect to each other to evaluate cutlets.

13. (new) A method as defined in Claim 10, further comprising determining a weight of cuts, including a ham or cutlets, directly from the measured values of the image analysis.

14. (new) A method as defined in Claim 10, further comprising using an average fat thickness over the MGM (5) in a region of an area between an extension of the perpendicular (10) as far as the outer contour (2.2) and another perpendicular (15) on the straight line (9) at a level of a rear (caudal) end (16) of the MGM (5) to evaluate the ham, when determining the trade value.

15. (new) A method as defined in Claim 10, further comprising providing statements regarding a belly using a middle

panniculus adiposus layer (17) in a cutlet region in the image region (1) from the cranial end (11) of the MGM (5) and a shoulder using ham, cutlet and belly from other measured values (16).

16. (new) A method as defined in Claim 10, further comprising when the method is used in butchering operations, using implemented self-learning effect with self-consistency checks on a data volume; and comparing results of weighing of cuts performed during processing with values provided in the data volume and supplemented if necessary with other data.

17. (new) A method as defined in Claim 16, further comprising using data volumes expanded by virtue of a self-learning effect as an upgrade in small slaughtering operations.

18. (new) A method of determining in a non-invasive manner, a trade classification, a trade value, a market value and a quality of a body of a slaughtered animal on a basis of optical image processing, comprising the steps of performing dissection trials from a sufficient number of pig carcasses, in which at first their weight is determined after killing and cooling; creating a digital image in a loin and ham region from a split side of a carcass half as an image region (1) using an imaging method; subjecting the image to image analysis and contour progression

of meat tissue, and detecting a fat tissue and bones; using contour progressions measuring individual lengths, distances averaged over contour regions and areas and also obtaining brightness and/or color values as characteristic parameters and measured values; within following dissection trials determining weight percentages of all cuts as individual cuts, including a weight of a fillet, a muscle-meat of shoulder, loins, boneless, ham and belly, a weight of the cuts and a weight of remaining cuts and storing them individually; allocating each of these characteristic parameters and measured values to a weight of the carcass and to weights of yields of individual cuts from a specific relational data are calculated as basic data; determining in an ongoing slaughtering operation a weight of pig carcasses after killing and cooling; creating a digital image of the image region (1) from the split side of the carcass half in a ham and loin region of a pig by using an optical sensor and subjecting the digital image to image analysis; determining in the image region (1) inside the ham and loin region lengths, angles, areas, brightness, and/or color information with all details as characteristic parameters and measured values; using a total weight of the carcass and data from results of previously performed dissection trials with respect to fluctuating yields of individual cuts of non-homogenous bodies of slaughtered animals; correlating in an active ongoing slaughtering operation, basis data obtained with dissection trials of a sufficient number of carcasses, o f weight percentages from yields of individual cuts, together with

characteristic parameters and measured values, including fat area (3), meat areas (4), meat measurement (F) and fat measurement (S), part lengths in a muscle meat and a fat, a middle fat layer over an MGM (5) in a region of an area between an extension of a perpendicular (10); placing a perpendicular (10) on a straight line (9) at a level of a front (cranial) end (11) of the MGM (5) to an upper (dorsal) edge of a vertebral canal (8) up to an outer contour (2.2) of the ham and loin region and another perpendicular (15) on the straight line (9) at a level of a rear (caudal) end (16) of the MGM (5) and stretching up to an outer contour (2.2) and a middle panniculus adiposus layer (17) in a cutlet region, determined from two halves of a carcass of a slaughtered pig in the ham and loin region using a total weight and relationship data obtained therefrom; in an active ongoing slaughtering operation in order to estimate yields of individual cuts performing a simulation calculation with available relational data of a carcass; and determining the characteristic parameters and measured values for this in the ham and loin region.

19. (new) A method as defined in Claim 18, further comprising in a part step of an image evaluation in order to perform an online calculation of a muscle meat percentage (MF%) placing a straight line (9) with a direction of a straight section of a spinal column at an upper (dorsal) edge of a vertebral canal (8); and on this straight line creating a perpendicular (10) at a level of a front (cranial) end (11) of a musculus

glutaeus medium MGM (5) so that its length of extension as a shortest connection from a front end (11) of the MGM (5) to an upper (dorsal) edge of the vertebrae channel (8) corresponds to a meat measurement (F) as a thickness of a loin muscle; determining at a level of a thinnest fat layer at the MGM (5) a connection line (12) from a contour of the MGM (5) to an outer contour (2.2), with a length of this extension representing an amount of fat (S); calculating the muscle-meat percentage (MF%) online from two terms (F) and (S) in accordance with a two-point method using a formula and subsequently classified into a trade class.

20. (new) A method as defined in Claim 18, further comprising in parallel with a perpendicular (10), calculating further perpendicular lengths (13) on the straight line (9) to the outer contour (2.2), with a starting point of each lengths on the straight line (9) lying in a virtually perpendicular extension of a layer between the vertebrae (6); cutting the perpendicular lengths (13) from an inner contour line (14) of a fat area (3) so that part lengths are created in a muscle meat and a fat; using their length as fat and muscle length and using their relationship with respect to each other to evaluate cutlets.

21. (new) A method as defined in Claim 18, further comprising determining a weight of cuts, including a ham or cutlets, directly from the measured values of the image analysis.

22. (new) A method as defined in Claim 18, further comprising using an average fat thickness over the MGM (5) in a region of an area between an extension of the perpendicular (10) as far as the outer contour (2.2) and another perpendicular (15) on the straight line (9) at a level of a rear (caudal) end (16) of the MGM (5) to evaluate the ham, when determining the trade value.

23. (new) A method as defined in Claim 18, further comprising providing statements regarding a belly using a middle panniculus adiposus layer (17) in a cutlet region in the image region (1) from the cranial end (11) of the MGM (5) and a shoulder using ham, cutlet and belly from other measured values (16).

24. (new) A method as defined in Claim 10, further comprising when the method is used in butchering operations, using implemented self-learning effect with self-consistency checks on a data volume; and comparing results of weighing of cuts performed during processing with values provided in the data volume and supplemented if necessary with other data.

25. (new) A method as defined in Claim 24, further comprising using data volumes expanded by virtue of a self-learning effect as an upgrade in small slaughtering operations.